

(PCT Article 36 and Rule 70)

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/053374

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☐ the international application as originally filed/furnished
- ☒ the description:
- pages 1-8 _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- nos. _____ as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* 1-10 _____ received by this Authority on 02.02.2006 with letter of 30.01.2006
- nos.* _____ received by this Authority on _____
- ☒ the drawings:
- sheets 2/3, 3/3 _____ as originally filed/furnished
- sheets* 1/3 _____ received by this Authority on 02.02.2006 with letter of 30.01.2006
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1.	Statement		
	Novelty (N)	Claims <u>1-10</u>	YES
		Claims _____	NO
	Inventive step (IS)	Claims _____	YES
		Claims <u>1-10</u>	NO
	Industrial applicability (IA)	Claims <u>1-10</u>	YES
		Claims _____	NO
2.	Citations and explanations (Rule 70.7)		
1.	Reference is made to the following documents:		
	D1 : EP-A-748 038		
	D2: US-A-2003/0164692.		
2.	<p>The present application fails to satisfy the requirements of PCT Article 33(1) because the subject matter of claim 1, in so far as it can be understood, does not involve an inventive step (PCT Article 33(3)).</p> <p>Document D1 is considered to be the prior art closest to the subject matter of claim 1. Said document discloses a method and a control device for a brushless DC motor that adjusts a lead angle as a function of the motor speed and load (see D1, page 4, lines 23-30). In D1, the lead angle is referred to as "torque angle" and defined as the angle between the rotor position and the activating stator magnet field (see D1, page 1, introduction).</p> <p style="text-align: right;">/...</p>		

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
	<p>Document D1 (see the description, page 2, line 38) also refers to optimisation of the phase shift by taking the motor speed and current into account.</p> <p>D1 also mentions (see the top of the first page of the description, lines 8-29) other documents in which the lead angle is optimised by methods that take into account motor speed and load.</p> <p>3.1 Thus, the subject matter of claim 1 differs from the known method in that no average values (that is to say mean values) are detected for power input (that is to say load) or voltage/current.</p> <p>3.2 The problem addressed by the present invention can consequently be regarded as that of implementing the teaching of document D1.</p> <p>3.3 The solution to the above problem, as proposed in claim 1 of the present application, cannot be considered inventive (PCT Article 33(3)). The reasons are as follows:</p> <p>the feature "detection of mean values" (that is to say detection of mean power input) is only one of several obvious possibilities from which a person skilled in the art would choose in order to solve the problem of interest, without thereby being inventive.</p> <p style="text-align: right;">/...</p>

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Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
	<p>Although the application of mean values for the speed of a motor is known from D2, the use of mean values in detecting current and/or voltage in filtering data captured by sensors is conventional and is constitutes general knowledge in the art.</p> <p>4. The same arguments apply in a similar manner in respect of claim 5.</p> <p>Thus, the subject matter of device claim 5 does not involve an inventive step (PCT Article 33(3)).</p> <p>5. Dependent claims 2 to 4 and 6 to 10 contain no features which, combined with the features of any claim to which they refer, meet the PCT requirements for inventive step (see documents D1 and D2, and the relevant passages cited in the search report.</p>